

REMARKS

Claims 1-18 are pending in this application. By this Amendment, claims 1, 9, 10, 15 and 18 are amended to even further distinguish over the applied references. Support for the amendments can be found, for example, at page 10, lines 12-15; at page 11, lines 5-10; and in Figure 2. No new matter is added.

The Office Action rejects claims 1-18 under 35 U.S.C. §103(a) over Vynne et al. (U.S. Patent No. 5,960,081) (Vynne) in view of Han et al. (U.S. Patent No. 6,845,130) (Han). The rejection is respectfully traversed. Vynne and Han fail to disclose or suggest the combination of features recited in independent claim 1.

Vynne fails to disclose or suggest a reference space divided into a plurality of predetermined portions, defining two complementary zones Z_0 and Z_1 in each portion, as recited in independent claim 1. The Office Action appears to acknowledge this fact in the second paragraph of page 7, where it states, "however Vynne fails to disclose or fairly suggest defining two complementary zones Z_0 and Z_1 in each portion, one of the two zones being situated inside the other one." The Office Action then contradicts itself, for example, by alleging that Vynne discloses " $U(n)V(n)$ are in the zone of the portion to which it belongs," citing elements 217 and 219 of Fig. 2.2 of Vynne. Applicants respectfully submit that Vynne neither discloses nor suggests a "zone." Applicants are unable to locate the basis of the Office Action's assertion that such a zone exists in Vynne. Further, even if Vynne discloses a plurality of predetermined portions, Vynne is silent on defining zones within the portions.

Vynne fails to disclose or suggest assigning a binary value to each of the two zones, as recited by independent claim 1. The Office Action fails to address this feature other than asserting "Han discloses two complementary zones ... minus the area of 16]], and assigning a binary value (taught by Vynne above) to each of the two zones." See Final Rejection, page 7, last paragraph, through the completion of the paragraph on page 8. However, the Office Action

fails to reference Vynne assigning a binary value to each of the two zones. Vynne is silent on such a feature. Vynne instead discloses binary values that relate to the signature bit set (col. 14, line 55 through col. 15, line 21). Vynne fails to disclose assigning bit values to any zones, and therefore Vynne fails to disclose or suggest assigning a binary value to each of the two zones, as recited in independent claim 1.

Further, Vynne fails to disclose or suggest modifying the coordinates of the selected motion vector so that the point is in the zone of binary value which corresponds to the bit of the marking key with which the selected motion vector is associated, as recited by independent claim 1. Vynne merely discloses modifying the coordinates of a selected motion vector by incrementing or decrementing the coordinate by an integer value corresponding to displacement of a block by one pixel, and therefore the change will cause a slightly different region to be selected from the previous frame. See Vynne col. 7, lines 47-51; col. 13 lines 43-65; and col. 14, line 63 through col. 15, line 20. Thus, Vynne fails to disclose or suggest modifying a motion vector so that a point changes its zone of binary value.

Additionally, Vynne fails to disclose or suggest if the point corresponding to the coordinates of the selected motion vector is in the zone of the portion to which it belongs, of binary value which corresponds to the bit of the marking key with which the selected motion vector is associated, not modifying the coordinates of the selected motion vector, and if the point corresponding to the selected motion vector is not in the zone of the portion to which it belongs, of binary value which corresponds to the bit of the marking key with which the selected motion vector is associated, modifying the coordinates of the selected motion vector, as recited by independent claim 1. Vynne discloses modifying a motion vector depending on the relationship of the signature bit and whether the condition of the coordinate is odd or even. Vynne is silent, and therefore fails to disclose or suggest modifying or not modifying bits based

on whether the motion vector is in the zone of the portion to which it belongs, as recited by independent claim 1.

Vynne fails to disclose or suggest marking a point (V) corresponding to the coordinates (Vx, Vy) of the selected motion vector (\vec{V}), the marking taking place in a reference space, divided into a plurality of predetermined portions, as recited by independent claim 1. Referring to Fig. 3.1A, Vynne discloses a frame at time n and a block 310 which is disclosed as a predetermined block of the image. Vynne discloses calculating a motion vector representing the motion of block 310 from frame (n-1) to frame (n). Thus, Fig. 3.1 A of Vynne discloses a method to calculate motion vectors (col. 13, lines 49-60). However, Vynne does not disclose a point corresponding to the coordinates of the motion vector marked in frame (n). Therefore, frame (n) of Vynne is disclosed in the context of calculation of the motion vectors, and not in the context of representation of motion vectors. Therefore, frame (n) is not, as asserted by the Office Action, a reference space divided in predetermined portions in which the marking of a point corresponding to the coordinates of the selected motion vector takes place, as recited in independent claim 1.

Han fails to overcome the deficiencies of Vynne. The Office Action asserts that Han discloses defining two complementary zones Z0 and Z1 in each portion, one of the two zones being situated inside the other, and assigning a binary value (alleged in the Office Action as being disclosed by Vynne) to each of the two zones. However, neither Han nor Vynne discloses or suggests assigning a binary value to each of the two zones, as recited in independent claim 1.

Han fails to disclose the other features lacking from Vynne, and therefore even when combined, Vynne and Han fail to disclose or suggest the combination of features recited in independent claim 1. For example, Han fails to disclose or suggest a step of determining two complementary zones in a reference space in which a point corresponding to the coordinates of the selected motion vector is marked, as recited by independent claim 1. Similar to Vynne, Han

discloses using the frame for calculating the motion vectors and not for marking a point corresponding to these vectors.

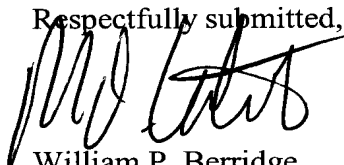
Moreover, even if a point represents the coordinates of the motion vector, it means that the origin of every represented vector is a unique point O. See Fig. 2, page 10, lines 12-15 and page 11, lines 5-10 of the application as filed. Thus, in frame 14 of Han, the origin of each vector is the position of the pixel 12 with which the motion vector is associated. Each vector would therefore have a different origin. Thus, frame 14 is not a reference space in which the marking of a point representing the coordinates of a motion vector takes place. Han neither discloses nor suggests a reference space in which the marking of a point corresponding to the coordinates of a selected motion vector takes place and, further fails to disclose that such a space comprises predetermined portions and two zones, one being situated inside the other.

Therefore, even when combined, Han and Vynne fail to disclose or suggest the combination of claim 1 features. Thus, claim 1 and its dependent claims are patentable over the applied references. Withdrawal of the rejection is respectfully requested.

In view of the foregoing, it is respectfully submitted that this application is in condition for allowance. Favorable reconsideration and prompt allowance of all pending claims are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number set forth below.

Respectfully submitted,



William P. Berridge
Registration No. 30,024

Mario A. Costantino
Registration No. 33,565

WPB:MAC/mem

Attachment:

Petition for Extension of Time

Date: January 24, 2008

OLIFF & BERRIDGE, PLC
P.O. Box 320850
Alexandria, Virginia 22320-4850
Telephone: (703) 836-6400

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